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CLAIMS

1. Method for the treatment of effluents in which a flow of the said effluents is subjected to a pulsed electric field that has the effect of modifying physicochemical and biologic characteristics, this modification being used during a solid / liquid separation operation, the solid / liquid separation and the application of a pulsed electric field being operations carried out at different locations in the effluent flow, characterised in that the pulsed electric field is used according to a discharge mode, in other words a single acting mode, and has voltage value, current value, pulse repetition frequency and voltage front shape characteristics chosen such that the required effluent treatment is achieved as a function of the locations at which these solid / liquid separation operations are carried out and a pulsed electric field is applied.

2. Method according to claim 1, characterised in that the pulsed electric field is used according to a charge or discharge mode, in other words a double acting mode.

3. Method according to claim 1, characterised in that the solid / liquid separation operation is a membrane filtration operation.

4. Method according to claim 3, characterised in that the filtration method is chosen among tangential

filtration, frontal filtration and semi-frontal type filtration.

5. Method according to claim 1, characterised in
5 that the solid / liquid separation operation is a
settlement operation.

6. Method according to claim 1, characterised in
that the said modification of physicochemical and
10 biological characteristics enables hydrolysis of
dissolved substances, aggregation of colloids, complete
or partial destruction of microorganisms and
simultaneous activation of remaining microorganisms.

15 7. Application of the method according to claim 1
to the treatment of treatment plant effluents and
sludge, either in an activated sludge reactor, or in a
rotofermenter.

20 8. Installation for the treatment of effluents,
comprising means for a flow of the said effluents to be
subjected to a solid / liquid separation operation, and
means for a flow of the said effluents to be subjected
to a pulsed electric field that has the effect of
25 modifying physicochemical and biologic characteristics,
this modification being used during a solid / liquid
separation, the solid / liquid separation means (13,
14, 15, 23, 33) and means for applying a pulsed
electric field (12, 24, 25, 34) being located at
30 different locations along the effluent flow,
characterised in that means for applying a pulsed

electric field are means operating according to a discharge mode, in other words a single acting mode, and with voltage value, current value, pulse repetition frequency and voltage front shape characteristics 5 chosen such that the required effluent treatment can be achieved as a function of the locations at which the solid / liquid separation operations are carried out and a pulsed electric field is applied.

10 9. Installation according to claim 8, characterised in that means for applying a pulsed electric field (12, 24, 25, 34) are means operating according to a charge and discharge mode, in other words a double acting mode.

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10. Installation according to claim 8, characterised in that means for subjecting the said effluent flow to a solid / liquid separation operation are membrane filtration means.

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11. Installation according to claim 10, characterised in that the filtration means (13, 14, 15, 23, 33) are chosen from among tangential filtration, frontal or semi-frontal type filtration means.

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12. Installation according to claim 8, characterised in that means to apply the solid / liquid separation operation to the said effluent flow are settlement means.

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13. Installation according to claim 3,
characterised in that the said modification of
physicochemical and biological characteristics enables
hydrolysis of dissolved substances, aggregation of
5 colloids, complete or partial destruction of
microorganisms and simultaneous activation of remaining
microorganisms.